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C L A I M S

1. A process for the manufacture of sulphur-containing fertilizers comprising the steps of:

(a) mixing ammonia, phosphoric acid and water in a reactor unit to obtain an ammonium phosphate mixture;

5 (b) introducing the mixture obtained in step (a) into a granulator unit to obtain granules, wherein a liquid phase comprising elemental sulphur is brought into contact with ammonia, phosphoric acid and water in the reactor unit in step (a) or is introduced in
10 the granulator unit in step (b).

2. A process according to claim 1, wherein the granules obtained after step (b) are dried in a drying unit.

3. A process according to claim 1 or 3, wherein the reactor unit in step (a) is a pipe cross reactor unit or
15 a preneutralizer.

4. A process as claimed in any one of claims 1 to 3, wherein the elemental sulphur is introduced as a slurry of sulphur particles in water, the particle size of the sulphur particles preferably being between 0.5 and
20 150 microns, more preferably between 1.0 and 100 microns.

5. A process as claimed in any one of claims 1 to 4, wherein the elemental sulphur is introduced as molten sulphur, the temperature of the mixture preferably being kept above 113 °C.

25 6. A process as claimed in any one of claims 1 to 5, wherein the ammonia is anhydrous gaseous ammonia or a concentrated solution of ammonia in water.

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7. A process as claimed in any one of claims 1 to 6, wherein a potassium salt and/or other plant nutrients has been added to the fines.

5 8. A process as claimed in any one of claims 1 to 7, wherein the elemental sulphur is biologically produced elemental sulphur.

10 9. Sulphur-containing fertilizers, preferably sulphur-containing diammoniumphosphate, sulphur-containing, monoammoniumphosphate or sulphur-containing fertilizers, nitrogen-phosphorous-potassium, obtainable by a process as described in any one of claims 1 to 8.

15 10. Sulphur-containing fertilizers as claimed in claim 9, wherein the sulphur content is less than 25% (w/w), preferably between 2% and 18%, more preferably between 5% and 15%, based on the final product.

11. Use of sulphur-containing fertilizers as claimed in claims 9 or 10 to grow agricultural products from soil, wherein the fertilizers are used on sulphur-deficient soil.

20 12. Agricultural products obtained from using the sulphur-containing fertilizers as claimed in claim 11.